

CLEAN SET OF CLAIMS

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Sub C, 17
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56. A method for processing a semiconductor wafer, data disk, semiconductor substrate and similar article requiring very low contaminant levels comprising the steps of:
moving a sealed container, holding at least one article in a horizontal orientation, [through]
to an interface port of a processing system;
unsealing the container by removing a panel of the container, to provide access to the article in the container;
engaging the article with an engagement head;
pivoting the engagement head to move the article from a horizontal orientation into a vertical orientation;
releasing the article from the engagement head;
placing the article on a shelf with the article in a vertical orientation;
lifting the article off of the shelf with a transfer robot;
carrying the article on the robot to a process chamber;
opening the process chamber;
moving the article into the process chamber;
closing the process chamber;
processing the article in the process chamber.

B₁ 57. ~~The method of claim 56 where the interface port is part of a processing system within an enclosure.~~

B₂ 62. ~~The method of claim 56 wherein removing the panel of the container places the interior of the container in fluid communication with the workspace within the enclosure.~~

B₃ 64. ~~The method of claim 56 wherein the engagement head is pivoted upwardly to move the article from the horizontal to vertical orientation.~~

~~sub C27~~ 65. A method for processing a semiconductor wafer, data disk, semiconductor substrate and similar articles requiring very low contaminant levels, comprising the steps of:

~~moving a sealed container holding at least one article in a horizontal orientation, to an interface port of a processing system;~~

~~unsealing the container, to provide access to the article in the container;~~

~~engaging the article with an engagement head by moving the engagement head in a first direction;~~

~~pivoting the engagement head, to move the article from a horizontal orientation into a vertical orientation;~~

releasing the article from the engagement head and placing the article on a shelf with
the article in a vertical orientation;

lifting the article off of the shelf with a transfer robot;

carrying the article on the transfer robot to a process chamber by moving the transfer
robot in a second direction, perpendicular to the first direction;

opening the process chamber;

placing the article into the process chamber;

closing the process chamber; and

processing the article in the process chamber.